

1 I claim:

2 1. A nurse call interface system for sensing if a patient is no longer in a  
3 predetermined position to signal a nurse through a nurse call box, said nurse call  
4 interface system comprising:

5 a sensor pad for positioning below said patient to receive weight of said patient  
6 thereon;

7 sensor pad connections for connecting said sensor pad to a nurse call interface;  
8 said nurse call interface including:

9 a source of power for said nurse call interface, said source of power  
10 feeding through said sensor pad connections to said sensor pad;

11 a microprocessor in said nurse call interface for receiving a loss of weight  
12 signal from said sensor pad via said sensor pad connections if weight of said  
13 patient is no longer on said sensor pad;

14 first warning signal being generated by said microprocessor upon  
15 receiving said loss of weight signal, said first warning signal being sent via a  
16 nurse call interface plug in said nurse call box to said nurse;

17 said microprocessor also allowing for a second warning signal from a  
18 nurse call button connecting therethrough via said nurse call interface plug and  
19 said nurse call box to said nurse ;

20 said nurse call interface being constructed so that said first warning  
21 signal and said second warning signal will not interfere with each other.

1 2. The nurse call interface system for sensing if said patient is no longer in a  
2 predetermined position as recited in claim 1 wherein said nurse call interface includes a  
3 voltage regulator between said source of power and said microprocessor to maintain at  
4 least a predetermined voltage level at said microprocessor, said microprocessor  
5 generating said first warning signal if said predetermined voltage level is not  
6 maintained.

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8 3. The nurse call interface system for sensing if said patient is no longer in a  
9 predetermined position as recited in claim 2 further including a light that is turned on  
10 by said microprocessor when said nurse call interface system is operating.

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12 4. The nurse call interface system for sensing if said patient is no longer in a  
13 predetermined position as recited in Claim 3 further comprising a connector for loading  
14 and updating code connected to said microprocessor

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16 5. The nurse call interface system for sensing if said patient is no longer in a  
17 predetermined position as recited in Claim 4 further comprising a jack for receiving  
18 input from said nurse call button.

1 6. The nurse call interface system for sensing if said patient is no longer in a  
2 predetermined position as recited in Claim 5 wherein said jack has at least two pins  
3 that reduce the resistance through a connected resistor when said sensor pad is  
4 depressed.

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6 7. The nurse call interface system for sensing if said patient is no longer in a  
7 predetermined position as recited in Claim 6 wherein said jack has at least 2 pins that  
8 maintain a short therethrough, whereby when said short occurs said nurse call interface  
9 begins operating.

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11 8. The nurse call interface system for sensing if said patient is no longer in a  
12 predetermined position as recited in Claim 7 wherein said microprocessor has a  
13 capacitor to prevent power of said microprocessor from propagating into the remainder  
14 of said nurse call interface.

1 9. A method for sensing and signaling if a patient is no longer in a predetermined  
2 position of a bed in connection with a nurse call box, comprising the steps of:  
3 positioning a sensor pad below said patient to receive weight of said patient  
4 thereon;  
5 connecting said sensor pad to a nurse call interface;  
6 providing power to said sensor pad and said nurse call interface with a power  
7 source;  
8 sending a loss of weight signal from said sensor pad to a microprocessor if  
9 weight of said patient is no longer on said sensor pad;  
10 generating a first warning signal upon receipt by said microprocessor of said loss  
11 of weight signal;  
12 second sending said first warning signal via a nurse call interface plug to a  
13 nurse;  
14 second generating a second warning signal upon receipt by said microprocessor  
15 of a signal from a nurse call button; and  
16 third sending said second warning signal via said nurse call interface plug to  
17 said nurse;  
18 wherein said first warning signal and said second warning signal do not interfere  
19 with each other.

1 10. The method for sensing and signaling if a patient is no longer in a predetermined  
2 position of a bed in connection with a nurse call box of Claim 9 further comprising  
3 maintaining a predetermined voltage level at said microprocessor, said microprocessor  
4 generating said first warning signal if said predetermined voltage level is not  
5 maintained.

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7 11. The method for sensing and signaling if a patient is no longer in a predetermined  
8 position of a bed in connection with a nurse call box of Claim 10 further comprising  
9 loading and updating code for said microprocessor.

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11 12. The method for sensing and signaling if a patient is no longer in a predetermined  
12 position of a bed in connection with a nurse call box of Claim 11 wherein said sending  
13 step further comprises the step of said microprocessor sensing the voltage from a  
14 resistor in the connection from said sensor pad.

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16 13. The method for sensing and signaling if a patient is no longer in a predetermined  
17 position of a bed in connection with a nurse call box of Claim 12 wherein said sending  
18 step occurs when the voltage sensed by said microprocessor from said resistor rises  
19 above a first predetermined value.

1 14. The method for sensing and signaling if a patient is no longer in a predetermined  
2 position of a bed in connection with a nurse call box of Claim 13 wherein said first  
3 predetermined value is 2.5 volts.

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5 15. The method for sensing and signaling if a patient is no longer in a predetermined  
6 position of a bed in connection with a nurse call box of Claim 14 wherein said second  
7 generating step further comprises the step of said microprocessor sensing a voltage in  
8 the connection from said nurse call button.

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10 16. The method for sensing and signaling if a patient is no longer in a predetermined  
11 position of a bed in connection with a nurse call box of Claim 15 further comprising  
12 regulating the voltage in the connection from said power source.

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14 17. The method for sensing and signaling if a patient is no longer in a predetermined  
15 position of a bed in connection with a nurse call box of Claim 16 further comprising the  
16 step of transmitting a signal from a voltage comparator to said microprocessor when the  
17 voltage sensed by said voltage comparator from said power supply drops below a  
18 second predetermined value.

1 18. The method for sensing and signaling if a patient is no longer in a predetermined  
2 position of a bed in connection with a nurse call box of Claim 17 wherein said second  
3 predetermined value is 5.8 volts.

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